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09/414,104	10/07/1999	MASAKI OKADA	1232-4578	2794

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EXAMINER	
TRAN, NHAN T	
ART UNIT	**PAPER NUMBER**
2615	

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/414,104	OKADA ET AL.	
	Examiner	Art Unit	
	Nhan T. Tran	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-45 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 6, 8-24, 28-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mogi (US 6,115,064) in view of Kusuda Hiroyuki (JP 10-260440).

Regarding claim 1, Mogi discloses an electronic device comprising:

a first system controller (camera microcontroller 125; Fig. 5, col. 6, lines 54-65);

a second system controller (lens microcomputer 115), which controls a drive operation of lens, and operates independently of said first system controller (see Fig. 5; col. 5, line 66 – col. 6, line 6; col. 3, lines 5-14 and col. 8, lines 7-10), wherein the lens is driven by the second controller in parallel with an operation that a drive signal (a fading start signal F1) is supplied to said first system controller after a power source is turned on (see Fig. 6; col. 3, lines 5-15; col. 4, lines 13-17, 52-59 & col. 7, lines 10 – col. 8, line 10 and note that image fading control operation

is initialized at step 203 and ended at step 206 by the camera microcomputer 125 *in parallel* to the lens driving initialization at steps 204 & 205 that is performed by the lens microcomputer 115).

Mogi is silent about that the lens driving operation driven by the second controller is for extending a lens barrel having a lens from a collapsed position. As taught by Hiroyuki, camera comprises a collapsible and extensible lens barrel (51) having a lens (50, 54). When a power source is turned on via a main switch 4 in a normal start up, the lens barrel is extended from a collapsed position to a predetermined position and the camera is ready to capture images. See Fig. 3, 4 & 11 and [0048].

Therefore, it would have been obvious to one of ordinary skill in the art to modify the camera apparatus in Mogi to include the teaching of Hiroyuki for extending the lens barrel having a lens from a collapsed position by the second system controller in parallel with an operation that a drive signal is supplied to the first system controller after a power source is turned on so that the camera is ready to capture images in an usual photography session as suggested by Hiroyuki in [0048].

Regarding claim 2, Mogi teaches that camera microcomputer (125) is a central processing unit, and wherein in said first system controller drive signal operation, the camera microcomputer starts an operating system immediately after turning on of the power source to the camera and also operates a control application program (fading control application). See col. 7, lines 17-21. It is noted that the camera must start an operating system before operating a control application program for fading in order for the apparatus to function as disclosed.

Regarding claim 6, Mogi also discloses that the second system controller (115) is a central processing unit (for the lens) and is always powered (see Figs. 5 & 6, wherein the power source is always on under YES).

Regarding claim 8, it is clear in Mogi that the second system controller is a hard-wired logic circuit as shown in Fig. 5.

Regarding claim 9, the first system controller inherently has processing speed faster than that of the second system controller since the first system controller controls the entire camera operation which must require a faster processing speed compared to the second system controller which only controls the lens device (see col. 6, lines 54-58).

Regarding claim 10, the electric consumption of the second controller must be lower than that of the first system controller because the first system controller controls the entire camera operation while the second system controller controls only the lens device which requires less power supply (see col. 6, lines 54-58).

Regarding claim 11, although Mogi discloses that the camera is a video camera instead of a digital still camera, it is well known in the art to improve a video camera to become a digital video camera that is capable to capture both motion and still images.

Therefore, it would have been obvious to one of ordinary skill in the art to enhance a video camera to capture a digital still image in a still mode in addition to a video mode.

Regarding claim 12, it is clear in Hiroyuki that the lens barrel (51; Figs. 4 & 8) protects the optical system of the digital still camera.

Regarding claim 13, see the analysis of claim 1.

Regarding claims 14 & 15, see the analysis of claims 1 & 12 for parallel operations of the collapsible lens barrel 51 and the first controller drive signal operation.

Regarding claim 16, it is also seen in the combined camera apparatus of Mogi and Hiroyuki that the camera has an in-use status (when the camera is turned on and being used by virtue of display being on, i.e., see monitor 123 in Mogi or LCD 122 in Fig. 11 of Hiroyuki) and a non-use status (when the camera is turned off and not being used, i.e, the monitor 123 or LCD 122 is off) different from each other, and wherein the second system controller controls the lens barrel (see claim 1) in parallel to the first system controller drive signal operation on the overall device, so as to cause the device to enter the in-use status (powered on and used) from the non-use status (powered off and not used). See Mogi, col. 6, lines 45-53.

Regarding claims 17 & 20, see the analysis of claims 1 & 11.

Regarding claims 18 & 22, it is clear in Hiroyuki that when the camera is not used, the camera is in an image sensing disabled status in which said image sensing lens is collapsed into a camera body (see Hiroyuki, Fig. 3 and [0048]).

Regarding claims 19 & 21, it is also clear in Hiroyuki that when the camera is used the camera is in an image sensing enabled status in which said image sensing lens is extended from a camera body to a wide-angle side position (see Hiroyuki, Fig. 4 and [0048]).

Regarding claim 23, see the analysis of claim 1.

Regarding claim 24, see the analysis of claim 2.

Regarding claim 28, see the analyses of claims 1 & 11.

Regarding claim 29, see the analysis of claims 12 & 13.

Regarding claim 30, see the analysis of claims 14 & 15.

Regarding claim 31, see the analysis of claim 16.

Regarding claim 32, see the analyses of claims 1 & 11.

Regarding claims 33-37, see the analyses of claims 18-22, respectively.

Regarding claim 38, see the analysis of the apparatus claim 1. In addition, the computer program product having readable program code is stored in the internal memory of the camera apparatus for the microcomputers 125 and 115 to execute instruction code to perform all functions as disclosed. See Mogi, col. 8, lines 6-10 and col. 6, line 66 – col. 7, line 6.

Regarding claim 39, see the analysis of claim 16.

3. Claims 3, 4, 25 & 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mogi (US 6,115,064) and Kusuda Hiroyuki (JP 10-260440) and in further view of Winter (US 4,521,678).

Regarding claim 3, Mogi and Hiroyuki are silent about that if the completion of the first system controller drive signal operation has not been notified within a predetermined period since the turning on of the power source to the first system controller, the second system controller returns the first system controller to a status before the power source was turned on to the first system controller, and turns off the power source to the first system controller.

Winter teaches a power management control method during initialization process of computer means in which two control processes are implemented. Upon receiving the supply voltage after the power switch has been turned on, the computer means performs predetermined

initialization procedures. If the computer means does not successfully complete the prescribed initialization procedures before the predetermined time interval elapses, the computer means returns the computer system to its initial status before the supply voltage was turned on to ensure proper operation of the system and then turns off the supply voltage to the system's circuitry to avoid excessive drain on the battery as suggest in col. 3, lines 42-46 & line 59 to col. 4, line 4.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the camera in Mogi and Hiroyuki by configuring the power management as taught by Winter so that if the completion of the first system controller drive signal operation has not been notified within a predetermined period since the turning on of the power supply to the first system controller, the second system controller returns the first system controller to a status before the power source was turned on to the first system controller, and turns off the power supply to the first system controller to ensure proper operation of the camera and avoid excessive drain on the battery.

Regarding claim 4, the combined apparatus of Mogi, Hiroyuki and Winter inherently includes that the predetermined period is *longer* than the period from turning on the power source to the first system controller to normal completion of the first system controller drive signal operation by the first system controller in order for the system to function properly because, if the predetermined period is shorter than the period from turning on the power source to the first system control in a normal operation, the camera apparatus would *always* be turned off after it was turned on regardless operating condition.

Regarding claim 25, see the analysis of claim 3.

Regarding claim 26, see the analysis of claim 4.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mogi (US 6,115,064) and Kusuda Hiroyuki (JP 10-260440) and in further view of Yamagami et al (US 6,229,954).

Regarding claim 7, Mogi discloses the power source in the video camera apparatus is turned on by the first system controller via operating part (126) as shown in col. 6, lines 61-63 & col. 7, lines 17-20. Mogi and Hiroyuki do not disclose that the second system controller controls the power source to the first system controller. However, Yamagami teaches a camera having an operation part (15) consisting all operating buttons including *a power switch* controlled by the mechanical & operation part control CPU (4) for turning on power supply to the camera. This mechanical and operation part control CPU (4) must also control the power supply to the system control CPU (13) (see Fig. 5; col. 16, lines 24-30 for all operating buttons of the camera located in operation part 15 and controlled under CPU 4).

Therefore, it would have been obvious to one of ordinary skill in the art to make an alternative arrangement to a power management that would be controlled by a second system controller instead of a first system controller to reduce workload on the first system controller.

6. Claims 5 & 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mogi (US 6115064) and Kusuda Hiroyuki (JP 10-260440) and in further view of Ozawa (US 5,721,987).

Regarding claim 5, see the analysis of claim 1 for the combination of Mogi and Hiroyuki. Mogi further discloses the operating part (126) for operating the camera in Fig. 5; col. 6, lines 61-63.

Mogi and Hiroyuki do not explicitly teach that if no operation instruction has been inputted by the operation unit within a predetermined period, the second system controller returns the lens barrel to a status before the power source was turned on to the first system controller, and turns off the power source to the first system controller.

As taught by Ozawa, the camera power source is turned off when no input operation has been performed for five minutes for prolonging the useful life of the power source for the camera (see col. 7, lines 20-23).

Therefore, it would have been obvious to one of ordinary skill in the art to combine the camera in Mogi and Hiroyuki with the teaching of Ozawa to provide a better power management control by automatically turning off the camera power source and retracting the lens into the camera body if no operation instruction has been inputted within a predetermined period for prolonging the camera power source.

Regarding claim 27, see the analysis of claim 5.

7. Claims 40 – 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al (US 6,157,394) in view of Nishi (US 2003/0151728) and in further view of Kusuda Hiroyuki (JP 10-260440).

Regarding claim 40, Anderson discloses an image sensing apparatus (Fig. 1) comprising:

image sensing means (224) for converting an optical image of an object to electric signals and outputting the electric signals (see Figs. 1 & 2);

mechanical drive means (234) for driving optical system (lens system 220; see Fig. 2);

signal processing means (228 or 420) for generating image signals by processing the electric signals outputted from the image sensing means (see Figs. 2 & 5; col. 5, lines 4-25);

file system means for storing the image data generated by the image processing means to a storage medium (see Fig. 4; col. 4, line 60 – col. 5, line 3);

control means (CPU 344) for controlling the mechanical drive means (via system bus 116 and interface 232), the signal processing means, and the file system means in response to turning on (at 356 & 342) of the image sensing apparatus (Figs. 2-4).

Anderson does not specifically disclose the initializations of the mechanical drive means, the signal processing means, and the file system means are started simultaneously in response to turning on of the image sensing apparatus. However, Anderson clearly teaches that the CPU is capable of **concurrently running multiple software routines** to control various processes of the camera (110) within a **multi-threading** environment as described in col. 3, line 64 – col. 4, line 6 to operate the camera system including mechanical drive means, signal processing means and file system means. It is seen that when the power supply (356) is turned on, the multi-threaded CPU (344) must initialize all controllable components including mechanical drive means, signal processing means and file system means for the camera (110) to function properly. In other reference to Nishi, it is well known that parallel processing would permit a lens adjustment

(which can take a long time) to take place in parallel to adjustments of other parts of an electronic device to *reduce overall setup time* (see Nishi, [0245]).

Therefore, it would have been obvious to one of ordinary skill in the art to realize the advantage of the multi-threaded CPU taught by Anderson in addition to the teaching of Nishi to configure each of initializations of the mechanical drive means, the signal processing means and the file system means to be run independently and simultaneously (no control signal from each other) so that the startup time of the camera is greatly reduced.

Although Anderson and Nishi are silent about extending a lens barrel having a lens from a collapsed position by mechanical drive means, such an operation is compensated by the teaching of Hiroyuki, wherein a lens barrel (51) having a lens (50, 54) is extended from a collapsed position (see Figs. 3 & 4) when the power source is turned on in a normal start up process. See Hiroyuki, [0048].

Therefore, it would have been obvious to one of ordinary skill in the art to combine the camera apparatus in Anderson and Nishi with the teaching of Hiroyuki for extending the lens barrel having a lens from a collapsed position by the mechanical drive means during the initialization process after the power source is turned on so that the camera is ready to capture images in an usual photography session as suggested by Hiroyuki in [0048].

Regarding claim 41, Anderson also discloses the operation of obtaining information on the removable memory in Fig. 4.

Regarding claim 42, it is also seen in Anderson that the information in the storage medium must include at least one of file format (i.e., JPEG) (see col. 6, lines 47-54).

Regarding claim 43, Anderson also shows motors (234) for driving lens (220) in Fig. 2.

Regarding claim 44, Anderson clearly discloses a real time, multi-threaded CPU as analyzed in claim 40.

8. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson, Nishi and Hiroyuki as applied to claim 41 and in further view of Fukushima Shinichi (JP 06-095754).

Regarding claim 45, Anderson and Nishi do not teach a DMA controller wherein the CPU performs initialization of the mechanical drive means and signal processing means during idle time of the DMA. Shinichi teaches a DMA controller that is implemented in a computer system to simultaneously transfer system file (processing program) from an auxiliary memory into system memory (system RAM) for the initialization process just after power source is turned on, and thereafter the DMA must be idle in order for the CPU to execute the processing program for initializing all system's functions as well as I/O devices of the system to shorten waiting time during system initialization (see Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art to further implement DMA process to simultaneously perform data transmission from a storage medium by file system means at initialization process by the DMA, and the CPU performs initialization of

the mechanical drive means and signal processing means during idle time of the DMA for shortening waiting time during the initialization processes.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-7371. The examiner can normally be reached on Monday - Thursday, 7:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NT.

DAVID OMETZ
SUPERVISORY PATENT EXAMINER